



**(43) International Publication Date**  
**13 October 2005 (13.10.2005)**

**PCT**

**(10) International Publication Number**  
**WO 2005/096263 A2**

- (51) **International Patent Classification<sup>7</sup>:** **G09G 5/00**
- (21) **International Application Number:** PCT/IB2005/051036
- (22) **International Filing Date:** 25 March 2005 (25.03.2005)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**  
04101361.6 1 April 2004 (01.04.2004) EP
- (71) **Applicant** (*for all designated States except US*): **KONIN-  
KLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL];  
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) **Inventors; and**
- (75) **Inventors/Applicants** (*for US only*): **WUBBEN, Robertus, H., M.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **HEKSTRA, Gerben, J.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (74) **Agents:** **GROENENDAAL, Antonius, W., M.** et al.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ,  
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,  
ZM, ZW.

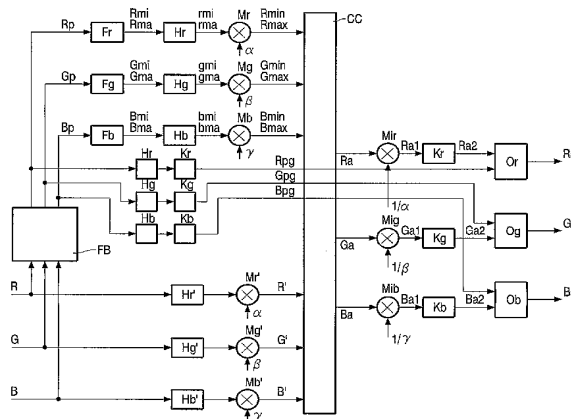
- (84) Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM,*

[Continued on next page]

- (54) Title:** DRIVING A MATRIX DISPLAY



- (57) Abstract:** A driver (D) for a matrix display panel (1) with a pixel (Pk) comprising a first and a second sub-pixel (SP11, 12) both having an inertia, receives a first and second input signal (R, G) indicating a first and a second desired brightness transition (BT1, BT2) of the first and second sub-pixel (SP 11, 12), respectively. The driver (D) supplies a first and a second drive signal (Ra, Ga) to the first and the second sub-pixel (SP11, 12), respectively. The first and a second drive signal (Ra, Ga) are supplied at a predetermined repetition rate, and levels of the first and the second drive signal (Ra, Ga) are limited between a minimum level (MI) and a maximum level (MA). The predetermined repetition rate may be the frame or line rate. The predetermined period is the reciprocal of the predetermined repetition rate. The driver (D) comprises: a detector (LV 1) which detects whether the first drive signal (Ra) within the single predetermined period (Tf) would have to surpass the maximum level (MA) or to fall below the minimum level (MI) in order to compensate for the inertia of the first sub-pixel (SP 11), and a level adapter (AC) which increases or decreases a level of the second drive signal (Ga) if it is detected that the first drive signal (Ra) would have to surpass the maximum level (MA) or fall below the minimum level (MI), respectively.



PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

**Published:**

— without international search report and to be republished upon receipt of that report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*